SMITHSONIAN
Zoogoer
SUMMER | 2014

You'll never see a liger at the Zoo. This is a very good thing.

Strong Genes

» Wandering the Zoo
» 2013 FONZ Annual Report
» Changes for *Zoogoer*: We Want to Hear From You!

The magazine for members of **FONZ** | FRIENDS OF THE NATIONAL ZOO

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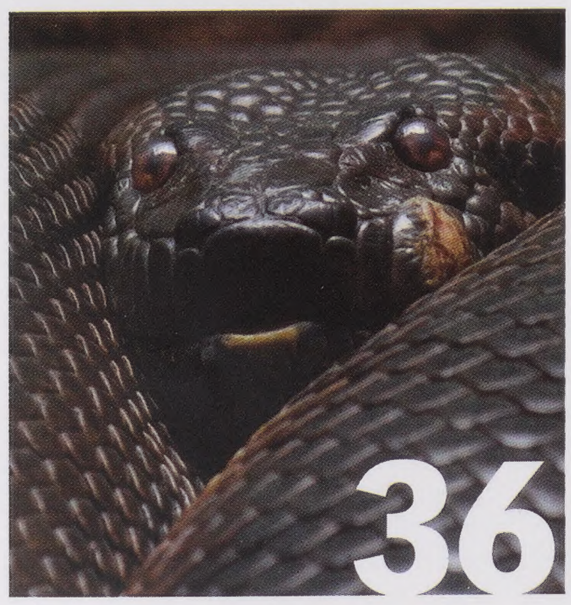

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SMITHSONIAN
Zoogoer

FONZ Friends of the National Zoo is the dedicated partner of the Smithsonian's National Zoological Park. FONZ provides exciting and enriching experiences to connect people with wildlife. Together with the Zoo, FONZ is building a society committed to restoring an endangered natural world. Formed in 1958, FONZ was one of the first conservation organizations in the nation's capital.

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Smithsonian **National Zoological Park** is located at 3001 Connecticut Ave., N.W., Washington, D.C., 20008-2537. Weather permitting, the Zoo is open every day except December 25. For hours and other information on visiting the Zoo, go to **nationalzoo.si.edu.**

Membership in FONZ supports the animal care, conservation, and educational work of the Smithsonian's National Zoo. It also offers many benefits: a *Smithsonian Zoogoer* subscription, discounts on shopping and events, discounted or free parking, and invitations to special programs and activities. To join, call 202.633.2922, or visit **fonz.org/join.**

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On the cover: Sukacita, one of the Zoo's two tiger cubs, stands between her mother's legs.
PHOTO BY BARBARA STATAS/FONZ PHOTO CLUB

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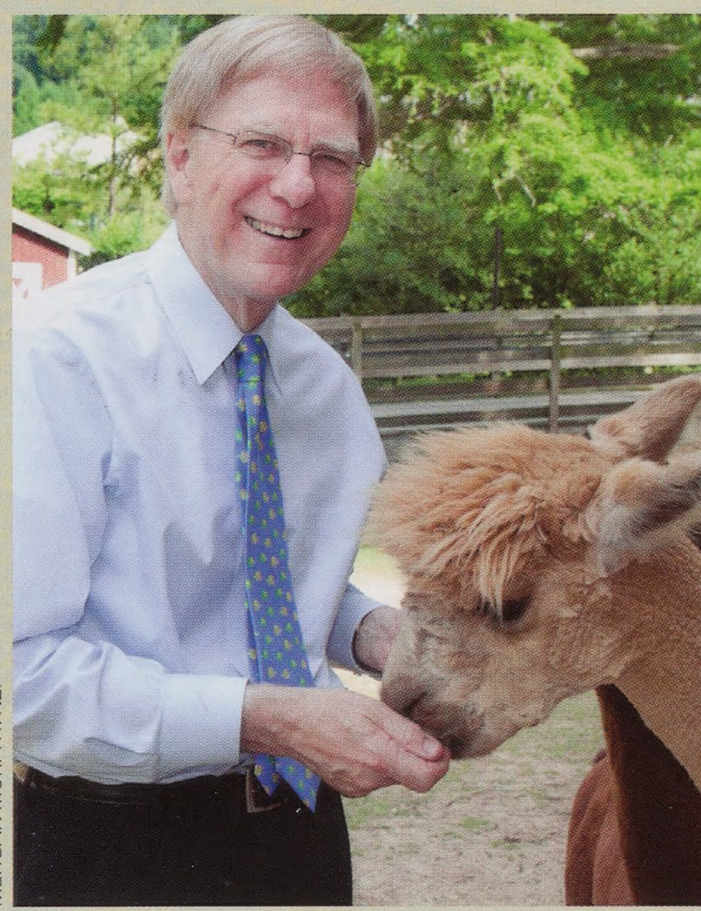
TOGETHER ON THE TRAIL

ON A FINE SUMMER DAY IN 2006, I CAME TO THE ZOO. I'd done so many times before, but that day was special: I was starting work at FONZ.

Eight years ago, the Zoo was putting the finishing touches on a major new exhibit, Asia Trail. It was exciting to watch the new project—a collection of naturalistic enclosures showcasing geographically related animals—come to life and engage the public with new animals exhibited in new ways. (See p. 14 to learn more about the Zoo's evolution.)

At the same time, the Zoo was embarking on a truly major new construction project: Elephant Trails. Rooted in the latest research about these magnificent animals' needs, the project included a state-of-the art Elephant Barn, new yards and pools, an Elephant Trek to provide exercise and enrichment, and the remaking of our historic Elephant House into an Elephant Community Center where elephants could socialize as they would in the wild.


MEHGAN MURPHY/NZP

The heart of the project, of course, was providing the facilities to deliver the best care for the elephants themselves. Their new home was created to support a flourishing herd, and it's been a thrill to watch our Asian elephant population grow. As I write this, three new females—Kamala, Swarna, and Maharani—are settling in after their journey from Calgary. Their arrival, along with the ability to view them in these wonderful new settings, is a tremendous advance for your Zoo!

In the last eight years, the Zoo has been remarkably transformed, by these new exhibits and by the Zoo's most recent major new project, American Trail. These achievements couldn't have happened without you. Your support of FONZ through membership dues, donations, event tickets, camp and class enrollment, purchases, and more enables us to make significant contributions to the Zoo's work. (See the 2013 FONZ Annual Report on p. 21.)

Like the Zoo, FONZ continues to evolve. We regularly refine our events, programs, and educational offerings. We restructured our basic membership levels, creating a Green Membership that emphasizes environmental sustainability. And now we're revising our publications strategy. With this issue, Smithsonian Zoogoer becomes a quarterly publication, a change that will lower both our costs and our ecological footprint. **We invite your thoughts on the magazine's evolution and how we can make it even better. Please share your ideas at *fonz.org/2014survey*.**

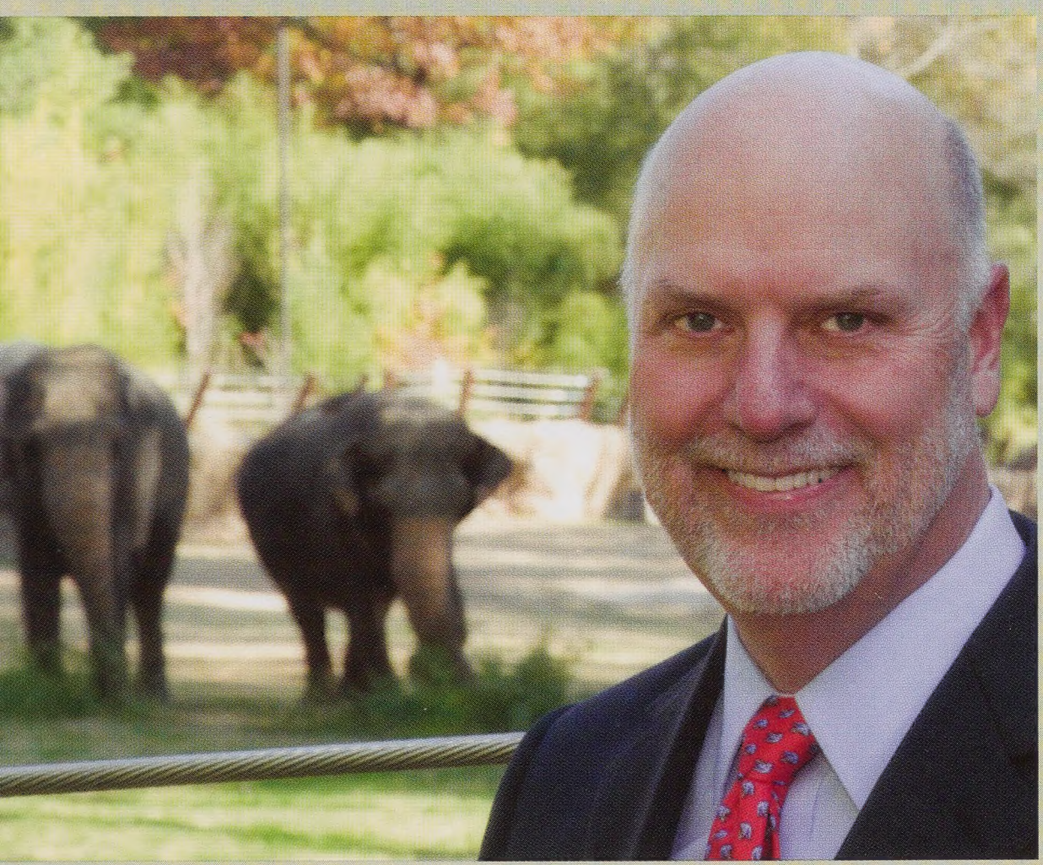
Thank you for joining us on the trail toward ever greater excellence!

Sincerely,

Bob Lamb

Bob Lamb
Executive Director, Friends of the National Zoo

HEART TROUBLE



MEHGAN MURPHY/NZP

"MY SOUL IS FULL OF LONGING FOR THE SECRET OF THE SEA," wrote Henry Wadsworth Longfellow, "and the heart of the great ocean sends a thrilling pulse through me."

One could argue that the true "heart of the great ocean" lies in coral reefs. Though they cover only slivers of Earth's surface, these amazing ecosystems sustain 25 percent of all marine life and provide livelihoods for millions of people. Coral reefs are the most biodiverse habitats in the sea.

You might think that coral reefs' global importance would earn them global respect. Not so. Pollution, overfishing (sometimes using dynamite), and damage by tourists all threaten reefs. So do rising ocean temperatures and higher levels of acidity in seawater. Both stem from the increase of carbon dioxide in our atmosphere.

Worldwide, coral reefs have shrunk by 20 percent since 1950, and many scientists are pessimistic about their survival. In the face of this grave and mounting threat to the heart of the great ocean, Smithsonian Conservation Biology Institute scientist Mary Hagedorn and her collaborators, including biologist Mike Henley, are pioneering ways to freeze time.

Strictly speaking, they freeze life: coral sperm and embryonic stem cells; the algae that live inside corals, giving the animals their brilliant colors and perhaps helping them survive in warming waters; and tropical urchins, which eat invasive algae that might otherwise smother reefs. The team has established coral cryobanks around the world. Locations include Australia's Great Barrier Reef, Hawaii, and Belize. So far, the banks have preserved about a trillion specimens from nine of Earth's eight hundred coral species. In time, the banks' frozen contents may be used to replenish reefs in the wild.

Meantime, Hagedorn, Henley, and their colleagues will keep diving into the fight to save coral reefs—gathering reef dwellers, pioneering new ways to preserve them, and bringing hope to the heart of the great ocean.

The Zoo's own heart also merits a word. The violence that occurred near the Zoo over spring break was a sobering reminder that our idyllic acres are an island in an urban sea. And it underscored the importance of my personal and professional commitment to the safety of our visitors, our staff, and our animals.

As reported in the news, the Zoo prepared carefully for spring break. Our Zoo police force partnered with the Metropolitan Police Department and other authorities to ensure a visible security presence and a safe environment. That presence—and prompt, professional responses from Zoo and FONZ staff at all levels—contained the crisis, minimized panic, and kept the park violence-free. I am deeply proud of my colleagues.

That said, we must and will improve. Together with Smithsonian colleagues, security experts, officials, and the community, we're developing a comprehensive plan for security at the Zoo. It will cover not only spring break, but each of the 364 days a year that we're open for you—our members—and other visitors. We'll share the plan with the community this fall.

We invite your support and help to keep the heart of the Zoo beating safely and soundly—every day of the year.

Sincerely,

Dennis Kelly
Director, Smithsonian's National Zoological Park

Help Shape the Future of Zoogoer

This issue marks a new beginning for *Smithsonian Zoogoer* magazine and you, our readers. With your help, we will transform this already wonderful magazine into something even better.

To start, we're shifting from delivery every other month to delivery once each season—spring, summer, autumn, and winter. By producing fewer issues each year, we will be able to bring you richer, better stories. Our science stories will be deeper, our kids' section more engaging, and our entire magazine more value-packed for you—our members, readers, and friends.

We know we want to add more pages to the magazine, and are already looking for ways to make this a reality. We're certainly going to add more stories about the animals and people at the Zoo, the species-saving conservation work at the Smithsonian Conservation Biology Institute, and the people and organizations working around the world to save our wild species and their habitats. We're even thinking about new ways to deliver *Zoogoer* electronically.

What do you think? This is your magazine, which means your opinion matters most of all. Please fill out our brief online survey and share your thoughts and suggestions. No ideas are too wacky or wild. This is a magazine for a zoo, after all—we like wild!

Thank you for your suggestions. With your help, we will shape a new and brighter future for *Zoogoer*!

Please take our survey: fonz.org/2014survey

Little Cats, Big Attitude

BY CRISTINA SANTIESTEVAN

Fishing cats have the body of a bulldog, the tail of an otter, and the webbed feet of a water creature. Yet their attitude is 100 percent feline.

MEYGAN MORWEUNZ

Never underestimate a fishing cat. It may look like an oversized house cat, weighing about 15 to 25 pounds. Its round face, squat legs, wee ears, and vibrant coat can make it seem cute, even cuddly. Don't be fooled.

"These cats, no questions asked, would kick your butt," says keeper Courtney Janney. "It's a complete Napoleonic complex. What they lack in size, they make up for in attitude. I have taken care of these cats for over three years, essentially every day. I do nothing but feed them and make their lives positive, and their first reaction to me is always to hiss and strike at the mesh."

It's not that fishing cats are mean. It's just that they're little cats in a big-cat world. They share their range in Southeast Asia with more than a dozen other cat species, including tigers and leopards. Those larger cats won't hesitate to make a meal of smaller ones. Fishing cats are tough because they have no other choice.

Born to Swim

Fishing cats get their name, distinctive body features, hunting technique, and unusual habitat from the central fact of their lives: They fish for food. These adaptable cats also hunt rodents, birds, reptiles, and amphibians. But fish are their primary prey.

Webbed feet and claws that retract only partially help these pint-size predators snag fish. Wedge-shaped heads allow for easy movement through water. Short tails provide perfect rudders.

All those adaptations add up at dinnertime. Fishing cats generally hunt from the shoreline. They watch for movement in the water, and dive in when a fish swims close by. The cats catch their aquatic quarry by snagging it with a paw swipe, pinning it against the bottom, or swimming in pursuit.

If no fish happens by, fishing cats may try to lure one in by gently tapping the surface with an outstretched paw. Scientists speculate that fish are attracted by this behavior

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Join the Clubs!

When you join Friends of the National Zoo, you also get the opportunity to join our exclusive clubs for FONZ members:

FONZ PHOTO CLUB — Open to photographers at all skill levels, Photo Club membership includes monthly meetings, an opportunity to grow your skills, and invitations to special photo opportunities. Free to FONZ members.
fonz.org/photoclub

SMITHSONIAN MIGRATORY BIRD CENTER CLUB — Enjoy access to members-only local and regional bird walks, field trips, and lectures. $30 for FONZ members. Your membership fee helps support the Smithsonian Migratory Bird Center and its work to save bird species.
fonz.org/birdclub

YOUNG PROFESSIONALS CLUB — Escape the office and join the FONZ YP Club for access to members-only social events and more at the Zoo and elsewhere. Free to FONZ members.
fonz.org/ypclub

SMITHSONIAN CONSERVATION BIOLOGY INSTITUTE CLUB — Join the club that supports conservation. You will receive a free parking pass for the annual Autumn Conservation Festival and regular updates on the latest happenings at SCBI. $30 for FONZ members.
fonz.org/scbiclub

MEHGAN MURPHY/NZP

Return of the Herons

After a winter spent in warmer climates, the Zoo's resident colony of black-crowned night-herons has returned to its nesting grounds near the Bird House. The birds are wild animals, and return every year to lay their eggs and raise their chicks. They will remain at the Zoo through early fall. Watch a video about black-crowned night-herons online: fonz.org/2014heronvideo.

Lion Cubs Take a Swim

Every lion or tiger born at the Smithsonian's National Zoo must pass a swim test before it can begin to explore the outdoor yards at the Great Cats exhibit. Shera's four cubs and Naba's two cubs all passed their swim test this spring, and are now on exhibit. Watch the video here: **fonz.org/2014lionswim**.

JEN ZOON/NZP

S. AMANDA CAUDILL/NZP

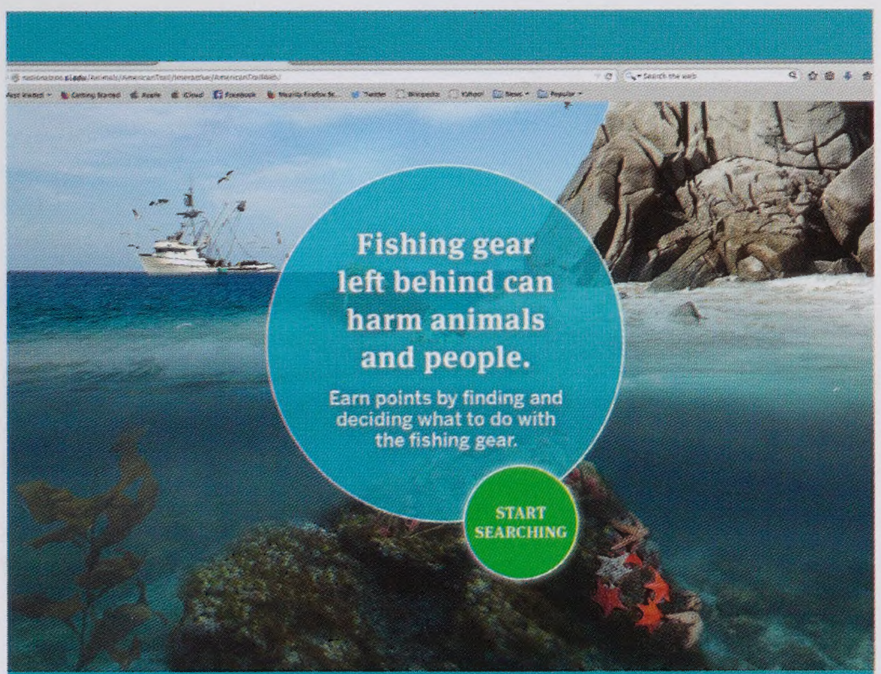
Quantifying the Benefits of Smithsonian Bird Friendly Coffee

After three months of fieldwork studying mammal diversity on various coffee farms and native forested habitats in Mexico, a team of Smithsonian Migratory Bird Center researchers returned home in early April. The Mexican mouse opossum (pictured) is one of nearly 20 species of mammals the team studied. Their results will increase our understanding of how bird friendly coffee farms may be better able to support native mammals when compared to conventional coffee farms. Stay tuned for updates in future issues of *Zoogoer*, and read their blog posts online: **fonz.org/2014smbcmammals**.

SMITHSONIAN'S NATIONAL ZOO

400 Tigers. 400 Records.

Scientists estimate that only 400 Sumatran tigers remain alive in the wild today. For years, the Zoo has worked to conserve these majestic cats both in D.C. and through various research projects in the field. Now, to raise more awareness, the Zoo has partnered with American rock band Portugal. The Man, to release an "endangered" song. Like the Sumatran tiger, this song can only survive with our help. Learn more about Sumatran tigers and their rock band supporters at **endangeredsong.si.edu.**



FISHING DEBRIS GAME

The cover story for our last issue of *Zoogoer* introduced the important topic of marine debris, including the threat posed by abandoned and lost fishing gear. Now you can test your ocean debris identification skills with a new online game. Visit **fonz.org/2014oceandebris** to play.

Mark Your Calendar

July 12: **Bear Awareness Day**—Become more bear aware at our free family-friendly event celebrating bears of all kinds. Sloth bear and Andean bear exhibits, 10 a.m. to 2 p.m. **FREE**

July 17: **Brew at the Zoo**—Raise your glass to conservation and sample the best beers from more than 60 craft and microbreweries. All proceeds support the Zoo—thank you! Tickets available online: **fonz.org/brew**

July 19: **Zoo in the Sky**—Explore the stars and animal-inspired constellations with a planetarium and scavenger hunt. Visitor Center, 10 a.m. to 2 p.m.

August 6: **Great Ape Day**—Celebrate great apes at this fun, free, educational event. Great Ape House, 10 a.m. to 2 p.m. **FREE**

August 23: **Bao Bao's Birthday Party**—Join FONZ for an exclusive members-only birthday bash for the cutest little panda in D.C. **fonz.org/baobaobday**

Sept. 6: **Vulture Awareness Day**—Learn all about these misunderstood scavengers, including the vital role they play in a healthy ecosystem. Cheetah Conservation Station, 10 a.m. to 2 p.m. **FREE**

Sept. 12: **Rock-N-Roar, sponsored by Whole Foods Market®**—Join FONZ and The Fray for the wildest concert in town! Member tickets available August 1. **fonz.org/roar**

Sept. 21: **ZooFiesta**—Celebrate Hispanic Heritage Month with golden lion tamarins, Andean bears, and other friends at the Zoo! 11 a.m. to 4 p.m. **FREE**

Sept. 27: **Sloth Day**—Turn your world upside down with this fun family-friendly event. Small Mammal House, 10 a.m. to 2 p.m. **FREE**

Oct. 4-5: **Autumn Conservation Festival**—Join us for an unforgettable weekend of fun, tours, and science at the Smithsonian Conservation Biology Institute. FONZ member tickets available in September. **fonz.org/acf**

GOOD Breeding

BY JENNIFER WEEKS

Visitors won't see white tigers or ligers at the Zoo. Here's why.

MEHGAN MURPHY/NZP

In December 1960, President Dwight Eisenhower greeted an exotic visitor on the White House lawn: Mohini, a white tiger imported from India. John Kluge, a wealthy businessman, had purchased Mohini and was donating her to the National Zoo as "a gift to the children of America." Smiling warily, Ike watched the majestic tigress pace around her cage, flinching when she roared.

Starting with Mohini, several generations of white tigers mesmerized Zoo visitors over the next 40 years. But when Taj, a male, was euthanized in 2002 at age 18 due to health problems, the Zoo did not seek a replacement for him. Instead, curators said they would concentrate on breeding critically endangered Sumatran tigers, whose numbers had dwindled to fewer than one thousand in the wild.

That shift reflected new thinking about the role of zoos. Instead of producing single animals with unusual traits, many zoos were pursuing a broader mission: helping endangered species recover. Carefully planned breeding programs could help conserve rare

species by maintaining genetically diverse populations in zoos, which could be used to repopulate native habitats should the species ever go extinct in the wild.

"Zoo collections used to contain lots of individual animals, like postage stamps in an album," explains Jonathan Ballou, a conservation geneticist at the Smithsonian Conservation Biology Institute (SCBI). "Now we design breeding programs that benefit species and maintain them as they would be in a natural wild state. Producing unusual animals like white tigers doesn't support that goal."

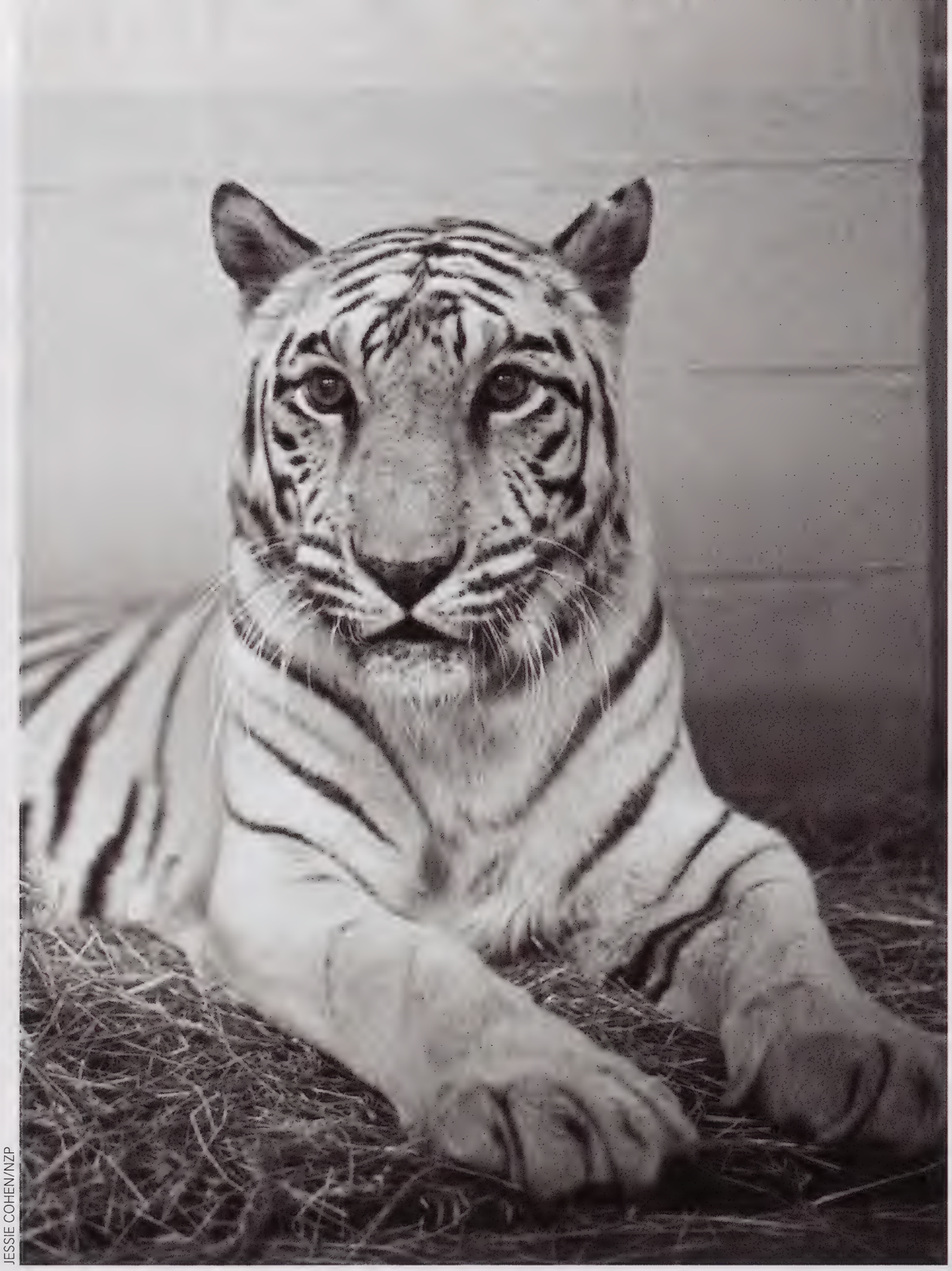
Cats of a Different Color

Contrary to popular belief, white tigers are not a distinct species. Nor are they albinos. Rather, they are color morphs—tigers that are genetically identical to their orange relatives except for their color.

The gene that controls coloration in tigers comes in two forms, or alleles, that produce either white or orange fur. Every tiger has a pair of these genes in its DNA—one copy from its father and one from its mother. The orange gene is dominant. It masks the white gene when they occur together. If a tiger has either two orange genes or one white and one orange gene, its fur will be orange. White fur only occurs when a tiger inherits a white gene from each parent.

If scientists know two tigers' genetic makeup, they can predict the odds that those cats will produce a white cub. When two orange tigers that each carry the white gene are bred, approximately 25 percent of the cubs in their litter will be white. If a white tiger mates with an orange tiger that carries the white gene, roughly half of their cubs will be white. And when two white tigers mate, all of their offspring will be white.

White tigers are extremely rare in the wild. According to some estimates, they occur perhaps once in every 10,000 to 15,000 wild births. That doesn't surprise Craig Saffoe, the Zoo's great cat curator, because white fur puts tigers at a disadvantage. "In the jungle, they would be spotted easily by predators and prey, and would probably be eliminated from the population," says Saffoe. As a result,



JESSIE COHEN/NZP

NZP ARCHIVES

TOP: **Mohini was the first of the Zoo's white tigers.**

BOTTOM: **The Zoo housed several white tigers between 1960 and 2002.**

FACING PAGE: **Unlike the Zoo's cheetahs (shown here), some individuals display a natural pattern variation in which their spots merge to form blotchy stripes. Those unusual cats are know as king cheetahs.**

few white tigers survive to pass on their genes to cubs.

Color morphs also occur in other great cats. Some leopards and jaguars have black fur. (These cats are often misidentified as black panthers; in fact, there is no distinct black panther species.) Black leopards and jaguars are more common than white tigers, probably because black fur helps these cats survive. "Their color helps them live in dark, secluded areas, so they survive and go on to breed. It's an advantageous gene," says Saffoe.

White lions occur naturally but rarely in southern Africa. They face the same survival challenge as white tigers—they are more visible than their tawny relatives, and so are vulnerable as cubs and disadvantaged as hunters. But unlike tigers, which are solitary animals, lions live in prides. This means white lions have other lions around for protection and help in making kills.

Yet another feline color morph, the king cheetah, has large blotchy spots that sometimes merge into stripes. This rare pattern does not appear to either improve or worsen cheetahs' chances for survival.

The Dark Side of Whiteness

White tigers are undeniably beautiful, with ghostly fur setting off their brown stripes and blue eyes (orange tigers' eyes are yellow-amber). But since the only certain way to produce a white tiger is to breed cats that are known to carry the white gene, most white tigers are products of inbreeding.

For example, Mohini was fathered in India by Mohan, a white tiger captured from the wild. Mohan's first mate was an orange tigress who produced a litter of orange cubs, all of whom carried a white gene from their father. Mohan was then bred with one of those tigers, a female named Radha, who gave birth to Mohini and three other white cubs. Mohan thus was both father and grandfather to Mohini.

After she came to the United States, Mohini was bred with Samson, an orange male from Mohan's first litter, which made him Mohini's uncle and half-brother. Two of Mohini's white cubs were loaned to the Cincinnati Zoo, which bred the brother and sister to produce more white cubs—the start of a multi-decade breeding program.

In the 1980s, genetics experts began warning that inbreeding in many species of captive birds and mammals was causing harmful impacts. In white tigers, common problems included "bulldog face," a deformity that made the cats' faces look flattened; strabismus, a condition in which the cats' eyes did not align in the same directions; and many other malformations, such as heart defects and cleft palates. Some of these traits were associated with the white color gene, while others resulted from inbreeding.

At the same time, zoos were looking for ways to help conserve endangered species. In 1981, the Association of Zoos and Aquariums (AZA), which accredits U.S. zoos, began developing Species Survival Plans (SSPs) for selected species at risk of extinction in the wild. SSPs established breeding goals and other policies to help zoos breed genetically diverse populations of target animals.

JESSIE COHEN/NZP

GOOD Breeding

Some zoos continued to breed white tigers. But in 2011 the AZA released a white paper that directed member zoos not to conduct selective breeding for color morphs or other rare genetic traits. "Propagating animals that specifically do not represent the normal characteristics and variation of the species creates a confused educational message," the AZA stated. The practice also produced many animals with physical deformities and ran counter to the goal of preserving genetic diversity.

"When you breed white tigers, you're not preserving a species—you're selecting for a genetic line that you happen to like," says Saffoe.

Today it's still possible to see white tigers in zoos and animal parks. But accredited zoos only display these animals if they were part of the zoos' collections before 2011, or were rescued from non-accredited zoos or other sources. When AZA zoos exhibit white tigers, they are expected to educate visitors about harmful results from deliberate inbreeding, and to make clear that white tigers are not a separate species.

Hybridizing Species

Some non-accredited zoos and animal parks take selective breeding further by mating lions with tigers. The resulting hybrid cats are known as ligers when they are born to a male lion and a female tiger, or tigons if their parents are a male tiger and a female lion.

Hybridizing between these two species produces bizarre results. Ligers are much larger than normal lions or tigers—they can measure nine feet long or more and weigh up to 1,000 pounds, more than three times the weight of a male Sumatran tiger. In contrast, tigons typically are smaller than either lions or tigers.

Lion-tiger hybrids are extremely unlikely to occur in the wild. Their ranges do not currently overlap, although historically they did in a very small region in India. Moreover, their social habits are very different: Lions live in prides, while tigers are solitary.

Ligers are more widely known than tigons, thanks to the 2004 movie *Napoleon Dynamite*, in which a geeky teen calls a liger "pretty much my favorite animal. It's like a lion and tiger mixed . . . bred for its skills in magic." In fact, ligers and tigons are bred mostly as money-making attractions. The AZA does not endorse breeding different species together, and no accredited U.S. zoos breed or exhibit lion-tiger hybrids.

"It's a completely discredited idea," says John Seidensticker, who heads SCBI's Conservation Ecology Center and was formerly the Zoo's great cat curator. "There was a time when zoos and circuses were in the same class, but since the 1970s and the focus on endangered species, those ideas have faded from zoos."

Breeding by the Book

The National Zoo's Sumatran tiger breeding program is guided by clear conservation values. Sumatran tigers are found only on the Indonesian island of Sumatra, and are critically endangered: The wild population is estimated at approximately 400 tigers.

The Zoo is one of 27 institutions across North America participating in the AZA's Species Survival Plan for Sumatran tigers. (Other nations also have similar programs.) In 2012, these zoos had a combined population of 74 Sumatran tigers. The SSP seeks to expand the population to 150, and to maintain more than 90 percent of the genetic diversity represented in the 16 "founders" that were used to establish the program. Every animal's pedigree and demographic history is tracked in a studbook, which curators consult to make sure that breeding decisions will promote genetic diversity.

Breeding the right cats isn't always easy. "Curators and zoo managers make plans and breeding recommendations, but they don't always lead to successful breeding. Animals may not be compatible, which we don't know beforehand when moving them between zoos," says Seidensticker. "Zoo curators spend a lot of their time coordinating breeding programs with other zoos."

One challenge is finding room at participating zoos for more tigers. "There's no denying that space is limited in zoos. By carefully managing the SSP, we ensure the individual animals have enough space," says Jonathan Ballou. That's another reason not to breed animals like white tigers that don't contribute to conservation.

Genetics can also be a constraint. Rokan, a Sumatran tiger who lived at the Zoo from 1997 until his death in 2010 at the advanced age of 20, fathered ten cubs that were bred and managed under the SSP. But after Rokan and his mate Soyono had their third litter in 2006, both tigers were "offlined" for breeding because their genes were well represented in the captive Sumatran tiger population. (Soyono was euthanized in 2012 at age 19.)

It took several years for the Zoo to acquire another breeding pair of tigers. In 2011 Damai, a two-year-old female, arrived from the San Diego Zoo. A year later, the Zoo acquired Kavi, a ten-year-old male, from the Atlanta Zoo. On August 5, 2013, Damai gave birth to two healthy cubs, Bandar and Sukacita, putting the SSP two cats closer to its goal.

"Our knowledge of genetic management drives our tiger program," says Seidensticker. So if you see Kavi, Damai, or their cubs during a visit to the Zoo, think of them as ambassadors who carry the heritage of Sumatran tigers in every cell of their bodies. SZ

— JENNIFER WEEKS *is a freelance journalist in Massachusetts who writes about environment, science, and health.*

The Zoo is one of 27 institutions across North America participating in the AZA's Species Survival Plan for Sumatran tigers.

Damai and her two cubs—Sukacita (top) and Bandar (bottom)—are part of the Zoo's current effort to help maintain a genetically diverse population of Sumatran tigers in American zoos.

BARBARA TATAS/FONZ PHOTO CLUB

NZP ARCHIVES

JESSIE COHEN/NZP

NZP ARCHIVES

What is a zoological park? Evolving answers to that core question have shaped the Zoo since its founding in 1889.

vistas & VISIONS

BY PETER WINKLER

But I don't *see* any buildings!" Those plaintive words came from a twilight visitor at the Connecticut Avenue gate last winter. A Zoo policeman had pointed her toward the Visitor Center, where she had a meeting to attend. The modest building, as is its habit, eluded notice.

Without realizing it, the visitor had stepped into the long and winding tale of architectural evolution at the Smithsonian's National Zoological Park. The story turns on how different generations have interpreted that last word in the Zoo's name—"park."

JESSIE COHEN/NZP

TOP: **Swinging along the O-Line, orangutans travel through the Zoo's architectural history, from the oldest extant building (now Think Tank) to the starkly modern Great Ape House.**

BOTTOM: **Built in 1904, the Zoo's first Small Mammal House later became today's Think Tank exhibit. The bear and other sculpted finials added a touch of whimsy to the roofline.**

The Olmsted Overview

To design its new zoological park, the Smithsonian turned in 1890 to Frederick Law Olmsted—the nation's leading landscape architect. Best known for New York City's Central Park, Olmsted created communities, campuses, and, of course, many parks throughout America. He also designed the grounds of the U.S. Capitol.

Not surprisingly, Olmsted seized on the word "park." Writing to Zoo director Frank Baker, Olmsted stressed the "important difference between a parklike place and a gardenlike place." Zoos at the time tended to be gardenlike: fairly small urban spaces that provided entertainment by displaying animals.

The Smithsonian's new Zoo would be different, Olmsted decided. It would be an expanse of varied and naturally wooded terrain where visitors could enjoy the "effects of scenery acting upon the mind." Yet entertainment was far from the park's sole purpose—science and conservation loomed large as well.

Samuel Pierpont Langley, who headed the Smithsonian during the Zoo's formative years, envisaged a landscape largely

devoted to the study and conservation of the continent's vanishing wildlife. It would be a refuge where "not only the wild goat, the mountain sheep and their congeners would find the rocky cliffs which are their natural home, but the beavers brooks in which to build their dams; the buffalo places of seclusion in which to breed and replenish their dying race; aquatic birds and beasts their natural home."

This being D.C., plans proved not to be predictions. Budget woes—perhaps the single sturdiest thread in the Zoo's history—precluded the fulfilment of Olmsted and Langley's vision. The Zoo didn't get its "places of seclusion in which to breed and replenish" until—under the visionary leadership of Theodore Reed and with help from FONZ—it acquired the 3,200-acre Front Royal campus in 1974.

Still, each generation strove mightily, with varying goals and limited resources, to build the best Zoo it could.

Beginning to Build

Langley and Olmsted shared an aesthetic and an adjective in their approach to the Zoo's construction. They wanted the park to be "picturesque," with buildings that echoed and amplified the landscape's natural beauty. Both rooted in New England, the pair turned to Boston architect William Ralph Emerson, a distant cousin of the famed author. His work was noted for sensitivity to its surroundings and the use of local materials.

Emerson created two of the Zoo's first buildings: the Buffalo Barn and the Carnivora House, both completed in 1891. The barn, the Zoo director wrote proudly, was "a novel and picturesque structure of black-oak logs admirably harmonizing with the location." Essentially a log cabin on steroids, it reflected the era's zoo-keeping vogue for buildings that evoked human dwellings in the animals' native habitat.

The sturdier Carnivora House was the Zoo's first stone building, constructed of gray gneiss quarried nearby. Built to last, it initially housed almost all the Zoo's animals, and it stood until 1974. Low and long, with towers at each end, it had both internal and external cages. Architectural historian Heather Ewing, who literally wrote the book on Zoo architecture and whose research supplied many of the quotes enriching this story, notes the "unintentional connotations of barracks or prison architecture."

The oldest Zoo building still standing dates from 1904. Designed by the D.C.

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MEHGAN MURPHY/NZP

JESSIE COHEN/NZP

firm of Hornblower and Marshall, it housed small mammals and later monkeys before becoming today's Think Tank. The gray stone was chosen to harmonize with the landscape and existing architecture. The designers did talk the Smithsonian into a playful note: rooftop finials depicting lynx, foxes, and bears.

At times during the picturesque period, even the formidable Samuel Langley needed the restraining touch of the Olmsted Brothers, the firm that carried on the work of their famous father. Often seen as a frosty scientist, Langley had a whimsical streak where the Zoo was concerned. His unfulfilled fancies included a belvedere, or viewing tower; a red-granite, centaur-adorned horse trough; and a maze like the one at Hampton Court in England. The Olmsteds firmly quashed that last idea as too expensive, out of character with the

FACING PAGE: **Visitors stroll the park in the early 1900s.**

TOP: **The Visitor Center, built in 1977, is one of several Zoo buildings designed to be as inconspicuous as possible.**

ABOVE: **Asia Trail, shown here shortly after it opened in 2006, exemplifies the importance of landscaping and horticulture in creating naturalistic animal habitats. The trees and other plants have filled in significantly since this photo was taken.**

J'NIE WOOSLEY

landscape, and inappropriate for a zoo. Langley relented, but that same assessment might have thrilled the Zoo's next great shaper: longtime director William Mann.

It's Showtime!

Mann took the helm of the Zoo in 1925 and grasped it firmly until 1956. For him, the park was "first of all an exhibition" that could "present to the public a bird's-eye view of the animal life of the world." Its paramount purpose, he believed, was to delight visitors.

Toward that end, Mann thought big. He doubled the size of the Zoo's living collection, circling the globe on expeditions that gathered both animals and attention. He orchestrated jazz concerts in the park, and his annual pre-circus party enchanted A-listers, deepening their support for the Zoo.

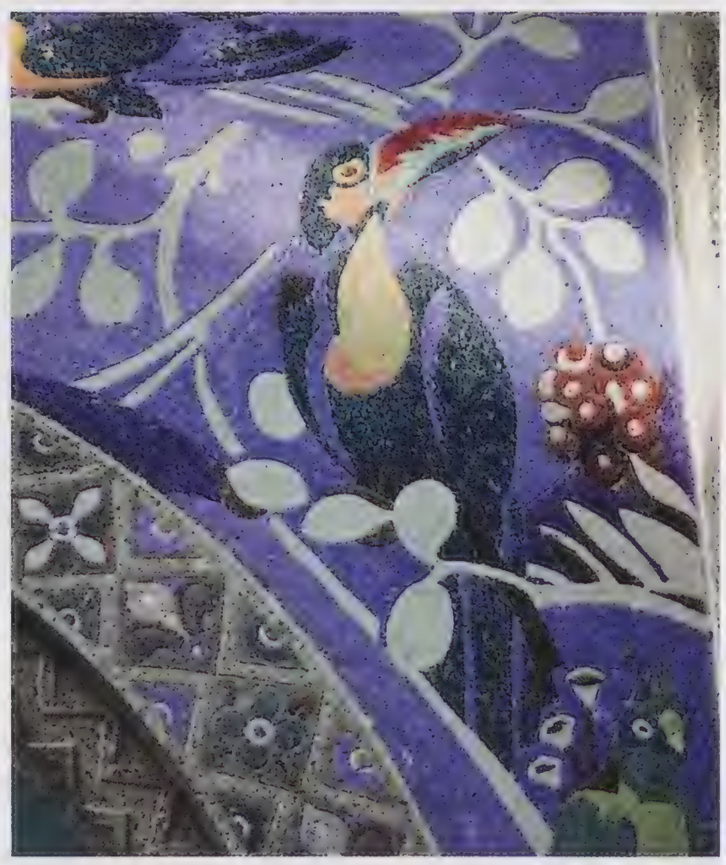
Mann found an eager collaborator in D.C.'s municipal architect, Albert Harris, whose portfolio included the Zoo. "They were showmen," Ewing says, "and they wanted a showplace." Not for them the self-effacing architecture of the early years. They yearned for the big and the bold, all the better to dazzle the public.

To flesh out their vision for the Zoo, Mann and Harris headed to Europe in 1929. They toured 20 of the continent's zoological gardens, marveling at both the palatial, richly ornamented buildings and the elegant, formal gardens—whose paths, Mann noted wryly, led invariably to each zoo's restaurant.

The dynamic duo's approach to Zoo architecture lives on most vividly in the Reptile Discovery Center, completed in 1930. Ewing, "a massive fan of Albert Harris," considers it the park's most successful building. The "Italian Byzanto-Romanesque ecclesiastic style," she wrote, was "a dramatic departure from zoo architecture anywhere." She believes Harris drew inspiration from Italian cathedrals, particularly those of Ancona and Verona.

NZP ARCHIVES

NZP ARCHIVES



NZP ARCHIVES

CLOCKWISE FROM TOP: **Exuberant, eye-catching, and richly ornamented, the Reptile Discovery Center (RDC), finished in 1930, typifies director William Mann's vision of the Zoo as a showplace; The carved critter tops a column at the RDC entrance; The avian mosaic once graced the Bird House entrance and now appears inside; The Bird House's original exterior (seen here) was later and dramatically altered by renovations.**

MEHGAN MURPHY/NZP

Lions and tigers once lived in the Zoo's first stone building, completed in 1891 and demolished in 1974. Today they prowl a verdant habitat (seen here) whose terraces hide an indoor enclosure as well as office space.

The Depression years also saw the construction of the Bird House (later altered beyond recognition), the Pachyderm House (now the Elephant Community Center), the Small Mammal House, and the Mane Restaurant. The robust construction program stemmed from Mann's deftness at securing funds from New Deal programs aimed at providing employment. The funding also supported artists whose creations, such as the Pied Piper images at the Small Mammal House, grace the Zoo to this day.

The boom busted after Pearl Harbor, when the war effort claimed the bulk of government funds and manpower. The Zoo limped through the forties and fifties, struggling to make ends meet and maintain its physical plant. By and large, construction ceased.

Erasing the Architecture

As the National Zoo hibernated, architects in Britain and Germany pioneered a radical new approach to zoo design. They created naturalistic habitats whose structural elements sought to be as inconspicuous as possible. This "new style of 'non-architecture,'" as Ewing terms it, first took hold at the Zoo in the seventies. It arose from several forces: greater knowledge of animal

A Walk in the Park

As times and needs—and resources—change, Zoo staff endlessly rethink the intricate relationships linking animals, land, and people, explains Jennifer Daniels, the park's landscape architect.

Back in the eighties, one product of that rethinking was the creation of a long-unfulfilled element in the Olmsted vision: "a broad and ample promenade" at the heart of the park. Slaloming the length of the Zoo, Olmsted Walk provides a central, unifying vista.

Today Daniels and her colleagues are polishing a key facet of the red-brick road—the need for, as the Olmsted Brothers put it, "better accommodations ... for the constantly increasing throng of people on foot." The challenge, as Daniels views it, is to ensure that the various elements of this "high-performing landscape" form a cohesive whole.

That includes everything from plantings to benches to souvenir stands to lights to signage and more. Daniels sees them all as pieces of a puzzle. She hopes, over the next few years, to arrange them in a way that welcomes guests, tells them the Zoo's story, and invites them into its great work of animal care, education, and conservation.

Art on the Ark

It's a zoo. It's a park. It's an art gallery. Art may not spring to mind when you think of the Zoo, but the park boasts a collection of compelling animal portraits in a variety of media. A stroll downhill will bring you face-to-fang with an ark's worth of crafted creatures. Here are a few highlights.

The bronze lions at the Connecticut Avenue entrance look as if they've been guarding the Zoo forever, but they've only been on the job since 2002. They are copies of the concrete lions on nearby Taft Bridge.

Two murals flank the Visitor Center entrance. A tile mosaic depicts a variety of fauna. Its inscription voices a lofty hope: "With all animals and all things we shall be as relatives." Opposite it, a Wyland mural offers an alluring underwater glimpse of dolphins by the painter renowned for his life-size depictions of whales.

A detour onto Asia Trail will take you to one of the oldest sculptures in the Zoo: "Tumbling Bears." Heinz Warneke, a local sculptor with a national reputation, created it in 1935. Pressing on to the Bird House, you'll find a granite eagle, five feet tall, that once adorned the old Pennsylvania Station in New York City.

Back on Olmsted Walk, drop by the Small Mammal House to admire the bronze anteater that has guarded the building since 1938. Farther along, give yourself plenty of time to enjoy the dinosaur mosaic and sculpted capitals that brighten the entrance of the Reptile Discovery Center. Inside, the original bronze doors merge past and present, depicting both dinosaurs and lizards.

Next door at the Think Tank, "The Gathering" invites you into the social world of chimpanzees as you walk amid seven life-size bronzes that capture the nuances of ape interactions. And finally, perhaps the Zoo's most beloved sculpture is "Uncle Beazley," a fiberglass triceratops that grazes by Lemur Island.

You can learn more from *Washington Sculpture* by James M. Goode.

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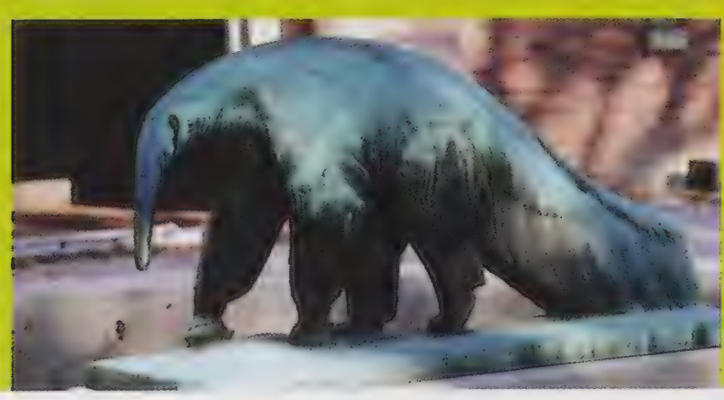
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MEHGAN MURPHY/NZP

welfare, the environmental movement sweeping the land, and zoos' growing role in conservation.

Once more, the final word in the National Zoological Park's name had a new meaning. It was no longer a picturesque escape nor a showman's stage. It was to be, as Zoo director Michael Robinson later put it, the setting for "a holistic form of 'bio-exhibitry'"—in short, a "biopark." Visitors would explore almost as if in the wild, focusing on animals behaving naturally in realistic surroundings. Set into the terrain wherever possible, buildings would offer minimal distraction.

The Zoo's most striking example of the biopark paradigm is the Great Cats exhibit, built in 1974. The prisonlike cages of the old Carnivora House gave way to a trio of open-air, hillside enclosures, richly landscaped and surrounded by a moat. Lions and tigers can prowl and swim at will as visitors watch safely from concrete cliffs that border the exhibit. Few visitors realize that the great cats are atop a sunken building that houses offices for nearly 20 Zoo employees. Other "earth" buildings—including the elusive Visitor Center—nestle elsewhere in the park.

Finessing the Future

Sprawling over 163 acres and 125 years, the Smithsonian's National Zoo is a landscape of both space and time. Each visit beckons you into the Zoo's endless quest to define itself, to find the best way to engage people with the wondrous species with whom we share a planet.

At times, the journey may seem circular. Olmsted's belief in unobtrusive architecture presaged modern buildings that attempt to be invisible. Langley's whimsical side would delight in the Pizza Garden and the Speedwell Foundation Conservation Carousel. It's all part of the path.

T.S. Eliot may have said it best: "We shall not cease from exploration, and the end of all our exploring will be to arrive where we started and know the place for the first time." SZ

—PETER WINKLER *is the editor of* Smithsonian Zoogoer.

Friends of the National Zoo 2013 ANNUAL REPORT

35,000 FONZ member households.

More than **202,000** attendees at FONZ events.

9,700 campers, slumber-partiers, and students.

One new **10,000** pound elephant.

$3,174,891 donated to the Zoo.

Together, we are the Friends of the National Zoo.

Thank you for your support.

MEHGAN MURPHY/NZP

$4,000,000. That's the value of FONZ volunteers. Nearly **1,500** individuals donated a total of **103,000** hours of service in 2013.

Morer than **175** of the D.C. area's top restaurants, breweries, and wineries donated delicious food and drink to ZooFari and Brew at the Zoo in 2013. FONZ organizes these and other fundraising events every year to generate important financial support for the Zoo.

MARK VAN BERGH/FONZ PHOTO CLUB

CONNOR MALLON/NZP

Dear Friends,

2013 was a year of elephantine proportions. Literally. Among FONZ's many accomplishments last year, Bozie's safe arrival tipped the scales as the greatest.

As you may imagine, it is expensive to ship an elephant halfway across the country. The trip requires food and water for elephant and caregivers, a special vehicle and trained driver, fuel, and more. These expenses are compounded by extended stays at both ends of the trip for the elephant keepers—our keepers spent time in Baton Rogue, LA, getting to know Bozie, and her longtime keepers then stayed in D.C. for several days while she settled into her new life here.

In total, the whole affair cost $50,000. When it became clear that the expense far exceeded what the Zoo's budget could cover, FONZ stepped in to help. In the end, we donated the entire cost for Bozie's transportation from Baton Rogue to D.C., bringing a fourth elephant to join the Zoo's growing herd.

Bozie's story is just one of many from 2013. Hers may be the biggest—or at least the heaviest—but we are equally proud of every FONZ accomplishment.

In these pages, we invite you to take a look back at 2013 with us. We include highlights from the year, a list of our generous donors, and a summary of our financials. We are pleased to report that FONZ is in good health, and continues to serve its primary function as a supportive and generous friend of the National Zoo.

We would be remiss if we did not close this letter with a heartfelt thank-you to the Zoo's most important collection of friends: each and every one of you. As an organization, FONZ supports the Zoo in myriad ways. We are able to do this important work because you, as families and individuals, support us. With your help, we help the Zoo. As the song goes, we all get by with a little help from our friends.

Thank you for all of your support in 2013, and your continued generosity this year and in all the years to come.

Sincerely,

Robert Lamb,
Executive Director,
Friends of the National Zoo

56 FONZ volunteers donated more than **375** hours to Mei Xiang's around-the-clock birth watch. They continued to help after Bao Bao's birth, monitoring both cub and mother to ensure both were thriving.

Friends of the National Zoo

2013 ANNUAL REPORT

From preschool through high school, more than **9,700** students explored, discovered, and learned about the natural world through FONZ's camps, classes, overnights, and other educational programs.

LEAH OVERSTREET

JIM JENKINS/FONZ PHOTO CLUB

More than **13,500** children and adults stormed the Zoo for a frightfully good time at FONZ's Boo at the Zoo and Night of the Living Zoo in 2013.

MARK VAN BERGH/FONZ PHOTO CLUB

500,000 lights illuminated the Zoo during ZooLights, which attracted more than **181,000** people in 2013

JIM JENKINS/FONZ PHOTO CLUB

Kids' Farm has a new Pizza Playground, thanks to support from FONZ members and Ledo Pizza®. We celebrated with a free pizza party for FONZ members in June.

When you support FONZ, you support the Zoo.

FONZ donated a total of **$3,174,891** to the Smithsonian's National Zoo in 2013. This gift will help support and sustain Zoo programs, from species conservation around the world to animal care in D.C. and Front Royal, Virginia.

Thank you for your support!

FINANCIAL REPORT	2013	2012
Membership	$2,587,917	$2,407,896
Contributions	$107,268	$137,003
Sponsorship	$716,347	$611,750
Visitor Services	$10,817,780	$10,701,153
Events	$1,835,858	$1,951,837
Education, Programs & Volunteers	$921,518	$870,753
Investments	$239,596	$251,881
Other Revenue	$162,237	$152,492
TOTAL SUPPORT	**$17,388,521**	**$17,084,765**
Program Expenses	$12,942,254	$12,233,299
Management and General	$417,134	$457,569
Development		$2,959
Loss on disposal of property and equipment	$470,625	$159,562
TOTAL OPERATING EXPENSES	**13,830,013**	**$12,853,389**
Support to NZP and SI	$3,653,238	$3,940,476
TOTAL EXPENSES	**$17,483,251**	**$16,793,865**
CHANGE IN NET NET ASSETS	**$(94,730)**	**$290,900**

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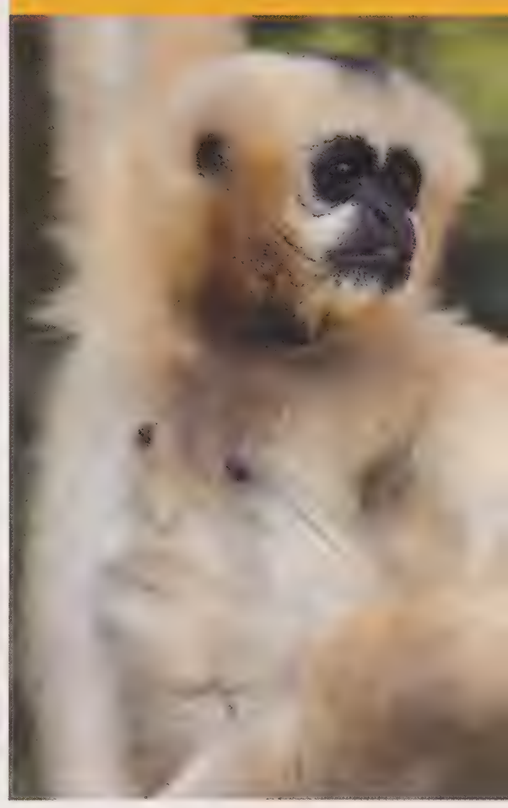

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Friends of the National Zoo
2013 ANNUAL REPORT

JANICE SVEDA/FONZ PHOTO CLUB

SMITHSONIAN zoogoer kids CORNER

BEAST BITS

Shy Serpent

Copperheads are venomous snakes, and should never be approached or touched in the wild. They are also shy and secretive, and really just want to be left alone. They use their venom to capture their prey, and do their best to hide from larger animals, including people. ***Slither on over to the Reptile Discovery Center to see the Zoo's northern copperhead snake.***

JESSIE COHEN/NZP

Gentle Giant

Cicada killers look like gigantic wasps, and they are. But, unlike their smaller relatives, these wasps are very gentle. They prefer to save their stings for their favorite food—cicadas—and rarely bother people. Cicada killers are wild animals; they dig their nest holes in the bare dirt at the outdoor prairie dog exhibit, sloth bear exhibit, and elsewhere. ***Buzz around the Zoo and you just may find one!***

RALPH JONES

Wasps, snakes, and wolves are all predators. They catch and eat other animals, known as prey.

fun fact

CREATURE FEATURE

TOP Dog

Gray wolves are big, beautiful, and not always gray.

BY TAYLOR ROMAN-COHEN

JIM JENKINS/FONZ PHOTO CLUB

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WORLD Wanderer

Gray wolves roam the open tundra and forests of Alaska, Canada, and the northern United States, as well as parts of Asia and Europe. The gray wolf is the largest canine species—some individuals weigh more than 150 pounds and measure nearly seven feet long.

A Wolf of MANY COLORS

Despite their name, gray wolves are not always gray. Their coats may be white, brown, gray, black, cinnamon, or some combination of colors. The Zoo is home to two gray wolves. One is white, and the other is dark gray.

CATCH ME if You Can

Gray wolves are fast. They can run up to 40 miles per hour, and use their speed to catch caribou, elk, and other prey animals. They also have an excellent sense of smell and hearing. This helps them track and find prey.

FAMILY Affair

Wolves are family animals. Most wolf packs include a single breeding pair—the mother and father—and several non-breeding helpers. Everyone chips in to raise any pups—even the helpers, who are often full-grown pups from previous litters. Most packs have four to nine members, but some have 15 or more wolves.

Talk to ME

Gray wolves use body language, tail movements, barking, growling, "dancing," and howling to communicate. This way, they can warn their pack of danger, let them know where to find food, or keep in touch while traveling.

At the ZOO

Lead your pack to see the Zoo's two gray wolves on American Trail.

YOUR TURN

Find the Prey

Gray wolves, copperhead snakes, and cicada killer wasps are all predators. They need to hunt to find their dinner. Can you find their names and the names of their favorite prey in this puzzle? HINT: There are six names to find.

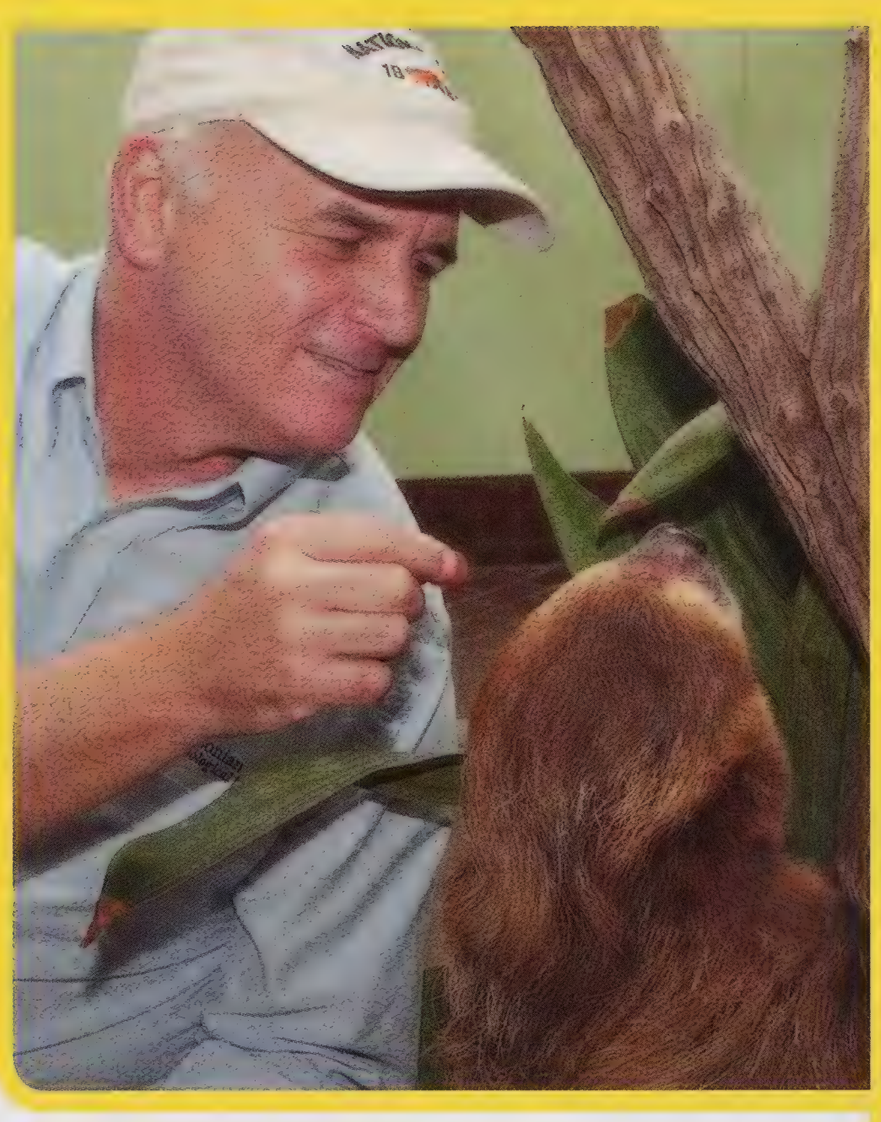
a	p	c	r	b	q	u	v	t	x	y	a	z
w	c	i	c	a	d	a	k	i	l	l	e	r
x	q	c	l	v	s	n	c	d	m	e	p	u
b	g	a	r	m	e	r	y	i	v	f	w	i
i	n	d	b	o	q	c	a	r	i	b	o	u
l	r	a	b	u	t	n	d	u	t	p	l	w
c	k	e	u	s	c	m	p	x	f	w	f	g
c	o	p	p	e	r	h	e	a	d	k	p	n
k	y	m	f	g	y	s	o	e	a	k	s	q

SMITHSONIAN Zoogoer kids CORNER

ZOO CREW

The Future of Conservation

For more than 30 years, Don Moore has worked with zoos across America, doing everything from field research to renovating and managing zoos. Now a new opportunity at the National Zoo could help him change zoos in profound ways.



MEGHAN MURPHY/NZP

Working with animals came naturally to Moore. He played in the woods as a kid, and studied zoology in college. After school, he worked for the Wildlife Conservation Society in New York as a senior curator at the Central Park Zoo and eventually as the zoo director at the Prospect Park Zoo.

Moore brought his experience to the Smithsonian's National Zoo seven years ago to serve as the associate director of animal care sciences.

A New Position

Now, Moore will be able to influence the Zoo in a new position that was created just for him—senior scientist for living collection sustainability.

That's a long title to describe an important job: making sure all the different species in the Zoo's care will survive and thrive for years to come.

To do this, Moore will collect and organize all the knowledge of the Zoo's scientists, keepers, and other animal care staff. Together, they already know a lot. By talking with everyone and recording their knowledge, Moore hopes to learn new and helpful things about caring for and breeding animals at the Zoo.

"The goal is to pull this information out of their brains, and to get it down on paper so that we can have excellent animal welfare for all of the animals in the overall zoo population within a species," said Moore.

Ambitious Goals

Finding and filling knowledge gaps in animal care is key to Moore's plans for the future. He wants to be sure everyone has access to the best information possible when trying to breed or conserve endangered species. Sometimes a seemingly small thing can have a big impact on whether or not an animal can breed or raise its babies successfully.

"It's a 'Goldilocks' thing," says Moore. "It might be that the nest box is too cold or too hot. Or the space might be too small or too large."

Moore doesn't know what all the answers are. No one does. His goal is to find them. And as he finds more of these answers, more species will survive and potentially thrive.

All Together Now

"The really strong link is zoos and aquariums," says Moore. There are 224 accredited zoos within the Association of Zoos and Aquariums. Together, they care for thousands of different species, and attract over 180 million people per year as visitors. Among those zoos, more than 160 million dollars are spent on conservation and conservation education. Zoos and aquariums are among the largest conservation forces in the world, and have directly saved more than 25 species, such as the black-footed ferret, red wolf, and California condor.

"Hardly anyone who visits us actually knows all of that." Moore says. "Our visitors want us to be leaders in conservation, they want us to educate them, and they want us to help them take conservation action. The public is with us. We just have to do it."

—DEVIN MILLER

FONZ Classes

Our teachers are real bears—and lions and otters and owls! Students learn about animals, science, and conservation through hands-on activities, crafts, and tours around the Zoo.

Learn more and register online: fonz.org/classes

WEEKDAY CLASS SERIES

Our weekly classes invite children to discover animals and the natural world while strengthening academic, developmental, and social skills. $150 for FONZ members. $180 for non-members. Enter ELEPHANT2014 at checkout to claim your discount: fonz.org/classes

Who's New at the National Zoo? There's a baby boom at the Zoo! We will visit some of the newest animal arrivals, learn how their families care for them, and make a "Who Am I" book as we get to know the Zoo's babies.
AGES: 2-3 (with adult)
TIME: 10-11:30 a.m.
DATES: Sept 22-Oct 24 (M, T, W, or F sessions)

Animal Architects Put on your construction hat! We'll travel from the treetops to deep underground to meet the animal builders at the Zoo. Then we'll put our skills to work and create a home for each animal.
AGES: 4-6 (with adult)
TIME: 1-2:30 p.m.
DATES: Sept 23-Oct 22 (T or W sessions)

After-School Adventures: Back to Class-ification! Our furry friends, scaly snakes, and spineless spiders are each in a class of their own! Join us as we meet reptiles, mammals, fishes, birds, and more through activities, crafts, and Zoo walks.
AGES: 7-10
TIME: 4-6 p.m.
DATES: Sept 23-Oct 22 (M or Th sessions)

Home Education Program: Zoo Clues
Calling all Zoo detectives! Grab your binoculars and join us as we venture through the Zoo to uncover clues about the animal kingdom and scientific methods. A new mystery each week!
AGES: 7-10
TIME: 11 a.m.-1 p.m.
DATES: Sept 25-Oct 23 (Thursdays)

FONZ MEMBERS SAVE!

Use these codes to claim your discount.
For D.C. programs: **ELEPHANT2014**
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Register online: **fonz.org/classes**

SUMMER CAMPS AND SLEEPOVERS—

Let your child run wild this summer with summer camps and sleepovers at the Zoo and the Smithsonian Conservation Biology Institute. Hurry—spaces are filling fast!

Register and learn more online.
SUMMER CAMPS: fonz.org/camps
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WEEKEND FAMILY PROGRAMS

Fun for the whole family! At least one adult must be present for every two children per group registration. $28 for FONZ members. $35 for non-members. Enter ELEPHANT2014 at checkout to claim your discount: fonz.org/classes

Ele-fun! What animal can use its nose to topple a tree or pick up a blade of grass? An elephant, of course! Learn more, try out your own trunk, and visit the Zoo's herd.
AGES: 4-7
TIME: 10-11:30 a.m.
DATES: Sept 20 or Sept 21 (choose one date)

Superman-imals Super strength, bionic vision, invisibility, and more: animals have amazing powers! Join us at the Zoo to discover the superheroes of the animal kingdom.
AGES: 4-6 (with adult)
TIME: 10-noon
DATES: Sept 27 or Sept 28 (choose one date)

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MEHGAN MURPHY/NZP

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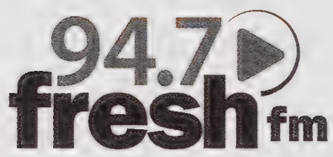

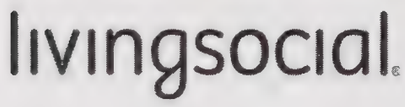

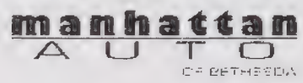

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Firehook Bakery
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Glendon Hartley
The Grill from Ipanema
The Hamilton
Hank's Oyster Bar
Hard Times Cafe
Hello Cupcake
Hill Country Barbecue Market
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The Oceanaire Seafood Room
Old Glory All American Bar-B-Que
Overwood
Paolo's Ristorante
Peeps & Company
Perry's
Ping Pong Dim Sum
Pinstripes
Plume at the Jefferson
Policy
Poste Moderne Brasserie
Pretty and Delicious by Chef Huda
Proof
The Queen Vic
Redwood
Ripple
Ris

The Ritz-Carlton, Tysons Corner
Rocklands Barbeque and Grilling Company
Rogue 24
Roofers Union
Santa Lucia Estate Coffee
Secolari
Shake Shack
Sonoma Restaurant and Wine Bar
Sugar & Ice
Tabard Inn
Taberna del Alabardero
Taco Bamba
Ted's Bulletin
Teddy & the Bully Bar
Tonic Restaurant Group
Toro Toro
Urbana Dining & Drinks
Vinoteca Wine Bar & Bistro
Westend Bistro
Whole Foods Market
Zentan

WINERIES

Adult Beverage Company
Barefoot Wine & Bubbly
Barrel Oak Winery
Early Mountain Vineyards
Francis Ford Coppola Winery
Freixenet USA
Hope Family Wines
The Hess Collection
J. Lohr Vineyards & Wines
Kobrand Corporation
Oyster Bay Wines – USA
Ruffino Estates
SVEDKA & Black Velvet

MARK VAN BERGH/FONZ PHOTO CLUB

FONZ Board: Call for Nominations

Help shape the future of FONZ by serving on our Board of Directors. The volunteer Board works closely with FONZ leadership to guide our efforts and shape our successes.

Nominations may be made for yourself or for other current FONZ members. All applications will be reviewed by the FONZ Board of Director's Oversight and Nominating Committee, and select candidates will be voted on by FONZ members this fall.

All current, dues-paying members of FONZ are eligible for nomination. For additional information or to receive a nomination application, please call 202.633.4379.

All nominations are due by July 31, 2014.

Our APP has that

The glass on your smart phone, of course, not the animal exhibits!
Get our mobile app and learn about animals, navigate the Zoo, watch web cams, and more! Download the National Zoo app today from the App Store or Google Play. If you want to get our animals' attention, do it by helping save them. Proceeds support the Smithsonian's National Zoo.

NANCY BRUN/FONZ PHOTO CLUB

Ready for My Close-up

"I am fascinated by the colors and textures of the reptiles," says FONZ member Nancy Brun.

Recently she spent a wonderful morning "photographing nearly all the residents" in the Reptile Discovery Center. Then she came face-to-face with a green anaconda, the world's heaviest snake. Anacondas weigh some 550 pounds, can grow 29 feet long, and may boast a diameter of 12 inches.

"This big gal seemed to be sitting there," Brun recalls, "waiting for someone to please take her portrait. I was happy to oblige."

Technical Notes —
CAMERA: CANON 7D; LENS: CANON EF 100-400MM, SET AT 250MM
ISO: 1,000; EXPOSURE: 1/40 SEC AT F/7.1

Submit Your Photos!

Smithsonian Zoogoer welcomes FONZ members' submissions of photos taken at the Zoo. Please send photos to Zoogoer@si.edu. We will contact you if we are able to use your picture for the Zoo View page.

Join the Club!

Membership in the FONZ Photo Club is open to photographers of all skill levels. The group meets monthly to hear guest speakers and to share and discuss members' work. Learn more at **fonz.org/photoclub**.

Drink Beer.
Help Us Save Wildlife.

Conservationists around the globe are plagued by the same question: "What can we do to help?" At Friends of the National Zoo we have an answer: drink beer.

Join us Thursday, July 17, and raise your glass to conservation at Brew at the Zoo. You can sample beers from more than 60 craft and microbreweries. The best part? Proceeds support FONZ and the Zoo's mission to save species. Now that's something worth toasting!

BREW AT THE ZOO • JULY 17 • FONZ.ORG/BREW

FONZ
Friends of the National Zoo

Friends of the National Zoo, PO Box 37012, MRC 5516, NW, Washington, DC 20013-7012, **www.fonz.org**

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National Zoological Park

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Thank you for being a FONZ member.
Your membership supports animal care, science, conservation, and more.